

# TOSHIBA

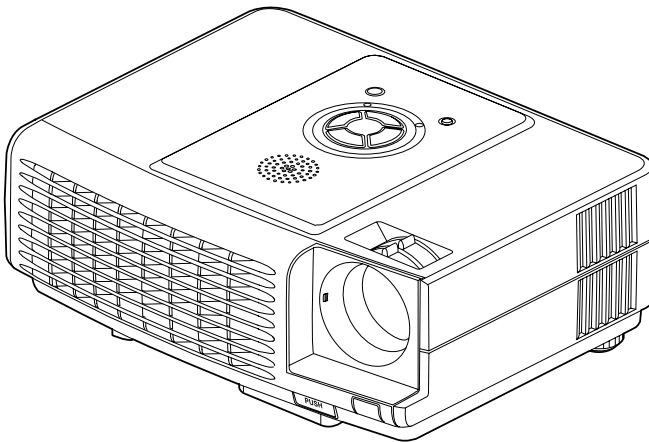
## *OWNER'S MANUAL*

# DATA PROJECTOR

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## TDP-S9

(SVGA)



Before Using

Preparations

Operations

Maintenance

Others

# SAFETY PRECAUTIONS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

**WARNING:** Handling the cord on this product or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

**WARNING:** This [product] contains mercury. Disposal of mercury may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: [www.eiae.org](http://www.eiae.org).

**MODEL NAME: TDP-S9**

**USA only**

TRADE NAME: DATA PROJECTOR

MODEL NAME: TDP-S9



Tested To Comply  
With FCC Standards

FOR HOME OR OFFICE USE

**FCC NOTICE:** This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RESPONSIBLE PARTY: TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

9740 Irvine Blvd., Irvine, CA 92618-1697 U.S.A

Phone: (949) 583-3000

**WARNING:**

**USA only**

Changes or modifications made to this equipment, not expressly approved by Toshiba, or parties authorized by Toshiba, could void the user's authority to operate the equipment.

**Notice:**

**CANADA only**

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

# IMPORTANT SAFETY INSTRUCTIONS

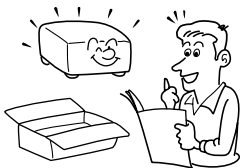
**CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS GIVEN IN THIS OWNER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.**

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use and servicing. This unit is fully transistorized and does not contain any parts that can be repaired by the user.

**DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.**

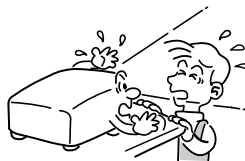
## 1. Read Owner's Manual

After unpacking this product, read the owner's manual carefully, and follow all the operating and other instructions.



## 3. Source of Light

Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyes or sight.



## 2. Power Sources

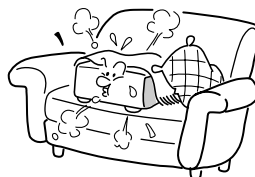
This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.



## 4. Ventilation

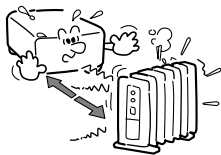
Openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered.

The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.



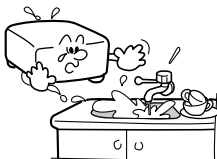
## 5. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



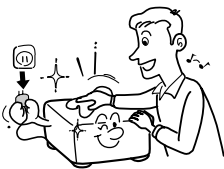
## 6. Water and Moisture

Do not use this product near water. - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool and the like.



## 7. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a soft cloth for cleaning.



## 8. Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.



## 9. Overloading

Do not overload wall outlets; extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.



# IMPORTANT SAFETY INSTRUCTIONS (Continued)

## 10. Lightning storms

For added protection for this product during storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.

However, while it is thundering or lightning, do not touch the apparatus and any connected cable and/or equipment.

This will prevent you from receiving the electric shock by an electric surge.



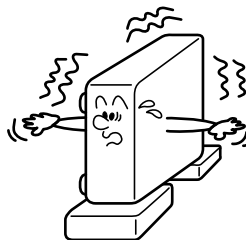
## 11. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.



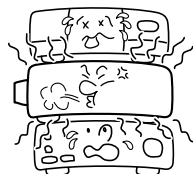
## 12. Do not place the product vertically

Do not use the product in the upright position to project the pictures at the ceiling, or any other vertical positions. It may fall down and dangerous.



## 13. Stack Inhibited

Do not stack other equipment on this product or do not place this product on the other equipment. Top and bottom plates of this product develops heat and may give some undesirable damage to other unit.



## 14. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

## 15. Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



S3125A

## 16. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a) When the power-supply cord or plug is damaged.
- b) If liquid has been spilled, or objects have fallen into the product.
- c) If the product has been exposed to rain or water.
- d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.

- e) If the product has been dropped or damaged in any way.
- f) When the product exhibits a distinct change in performance - this indicates a need for service.

## 17. If glass components, including lens and lamp, should break, contact your dealer for repair service.

This product incorporates glass components, including a lens and a lamp. If such parts should break, please handle with care to avoid injury and contact your dealer for repair service. The broken pieces of glass may cause to injury. In the unlikely event of the lamp rupturing, thoroughly clean the area around the projector and discard any edible items placed in that area.

## 18. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



## IMPORTANT SAFETY INSTRUCTIONS (Continued)

### 19. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.  
(Replacement of the lamp only should be made by users.)

### 20. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.



### 21. Do not leave thermal-paper documents or easily deformed items on top of the unit or near the air exhaust for long periods of time.

The heat from the unit could erase the information on the thermal paper, or cause deformation or warping.

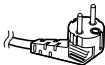
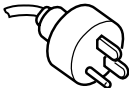
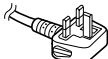
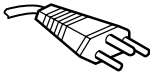
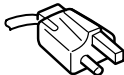
### 22. Do not use the product in a closed installation state.

Do not place the product in a box or in any other closed installation state. Otherwise it may overheat. This could result in a risk of fire.



# POWER SUPPLY CORD SELECTION

If your line voltage is 220 to 240V, use one of the following types of cable.

Plug configuration	Plug type	Line voltage	Plug configuration	Plug type	Line voltage
	EURO	220 – 240V		Australian 240V 10A	200 – 240V
	UK	220 – 240V		Switzerland 240V 6A	200 – 240V
Use a 5A fuse which is approved by ASTA or BSI to BSI362. Always replace the fuse cover after changing the fuse.				North American 240V 15A	200 – 240V

## IMPORTANT PRECAUTIONS

### Save Original Packing Materials

The original shipping carton and packing materials will come in handy if you ever have to ship your projector. For maximum protection, repack the set as it was originally packed at the factory.

### Moisture Condensation

Never operate this unit immediately after moving it from a cold location to a warm location. When the unit is exposed to such a change in temperature, moisture may condense on the crucial internal parts. To prevent the unit from possible damage, do not use the unit for at least 2 hours when there is an extreme or sudden change in temperature.

### Place and Manner of Installation

- Do not place in hot locations, such as near heating equipment. Doing so could cause malfunction, and shorten the life of the projector.
- Avoid locations with oil or cigarette smoke. Doing so will dirty the optical parts, shortening their lives, and darkening the screen.
- Do not use the product vertically in any upright position or slantwise in an angle of 20 degrees or more.
- Using this instrument near a TV or radio may cause interference to the images or audio sound. If this happens, move it away from the TV or radio.
- Moving the projector from a low-temperature room to a high-temperature room may cause condensation on the lens or internal parts in the instrument. If you continue to use it in that situation, the malfunction may result. Ensure to wait until the condensation naturally disappears.
- In a high altitude location where air is thin, cooling efficiency is reduced so use it with the ambient temperature being lowered.

## IMPORTANT PRECAUTIONS (Continued)

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### Avoid Volatile Liquid

Do not use volatile liquids, such as an insect spray, near the unit. Do not leave rubber or plastic products touching the unit for a long time. They will leave marks on the finish.

If cleaning with a chemically saturated cloth, be sure to follow the product's precautions.

In the spaces provided below, record the Model and Serial No. located at the bottom of your projector.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

Retain this information for future reference.

## EXEMPTION CLAUSES

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- Toshiba Corporation bears no responsibility in the case of damages arising from natural disaster such as earthquakes, lightning, etc., fire not liable to Toshiba Corporation, operation, theft or mischief by third parties, other accidents, or use under abnormal conditions including erroneous or improper operation and other problems.
- Toshiba Corporation bears no responsibility for incidental damages (lost profit, work interruption, corruption or loss of the memory contents, etc.) arising from the use of or the inability to use this unit.
- Toshiba Corporation accepts no liability whatsoever for any damages arising from not having followed the descriptions in this Instruction Manual.
- Toshiba Corporation accepts no liability whatsoever for any damages arising from malfunctions arising from combination with equipment or software that is not related to Toshiba Corporation.

# OTHER CAUTIONS AND INFORMATIONS

## Copyrights

Showing or transmitting commercial imaging software or broadcast or cable-broad casting programs with the purpose of other than the personal and private viewing, including modifying images using the freeze or resize functions, or displaying with the varying aspect ratio of the images, could violate the direct or indirect copyrights of the imaging software or broadcast program, etc., if done without first consulting with the copyright holder. For this reason, please take appropriate measures before performing one of the actions listed above, including obtaining a license from the copyright holder.

## Disposal

This product contains substances which are harmful to humans and the environment.

- Solder used in the internal parts contains the lead.
- The lamp contains inorganic mercury.

Please dispose of this product or used lamps in accordance with local regulations.

## Trademarks

- VGA, SVGA, XGA, SXGA, UXGA are trademarks or registered trademarks of International Business Machines Corporation.
- Digital Light Processing, Digital Micromirror Device and DMD are trademarks of Texas Instruments.
- Macintosh is a registered trademark of Apple Computer, Inc.
- Windows is a registered trademark of Microsoft Corporation in the U.S. and other countries.
- Adobe is a registered trademark and Acrobat Reader is a trademark of Adobe Systems Incorporated.

## Notational Conventions Used in This Manual

- References to pages with related information are annotated as follows.  
For example, if making a reference to page 36: **p.36**
- The illustrations in this document are for reference purposes only and may not reflect your package exactly.

# REMOTE CONTROL BATTERY

- Be sure to use Lithium battery (3V).
- Do not reverse the polarity when inserting the battery.
- Do not recharge, heat, disassemble, short-circuit, or burn the battery.
- Do not use the battery beyond the expiration date indicated on the battery or leave a dead battery in the remote control.

Using the battery improperly may cause it to explode or leak and lead to burn or injury. If battery-leaking fluid contacts skin, wash the fluid off immediately with clean water and consult a doctor. If the fluid is spilt on an instrument, avoid contact and wipe it off using tissue paper. (Dispose of the used tissue paper as flammable garbage after moistening with water.)

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## Maintenance

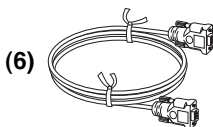
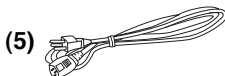
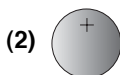
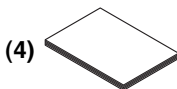
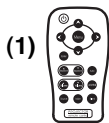
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# Checking the package contents

Please make sure that the following items are included in the box, along with the main unit. If any item is missing, please contact the store immediately where you purchased the product.



- ☐ (1) Remote control
- ☐ (2) Lithium battery (3V) for remote control

\* Lithium battery is mounted in the remote control. Remove the isolation sheet before use.

- ☐ (3) CD-ROM
- ☐ (4) Owner's Manual
- ☐ (5) Power cord (See note)
- ☐ (6) RGB cable (D-Sub to D-Sub)
- ☐ (7) Carrying bag

## Note

The shape and number of supplied power cords vary depending on the product destination.

## ◆ The Supplied CD-ROM


The supplied CD-ROM contains an owner's manual, including information not available for the printed Owner's manual (Getting started) and Acrobat® Reader™ to view the manual.

### ■ Installing Acrobat® Reader™

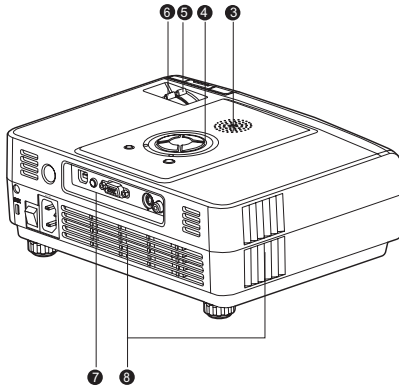
Windows®: Run the CD-ROM, select the **Reader/English** folder, and run **ar500enu.exe**. Follow the on-screen instructions.

Macintosh: Run the CD-ROM, select the **Reader/English** folder, and run **Reader Installer**. Follow the on-screen instructions to install the software.

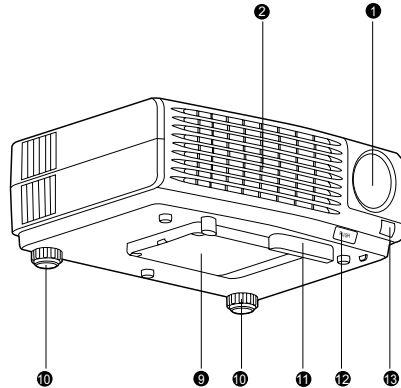
### ■ Viewing the manual

Run the CD-ROM and double-click on **Start.pdf**. Acrobat® Reader™ launches, and the menu screen of the Owner's manual appears. Click on your language. The Owner's Manual cover and list of bookmarks appear. Click on a bookmark title to view that section of the manual. Click on  to view a reference page with related information. See the Help menu for more information about Acrobat® Reader™.

# Names of each part on the main unit



Back

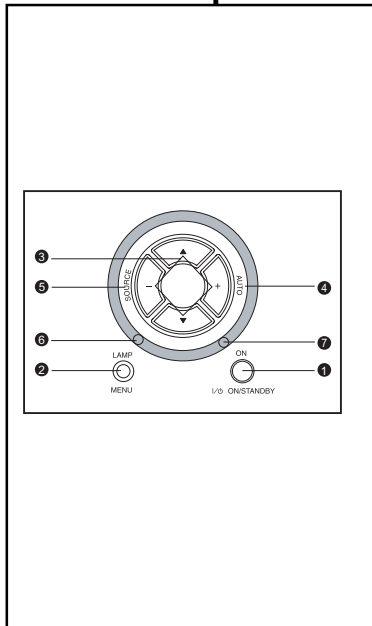


Front

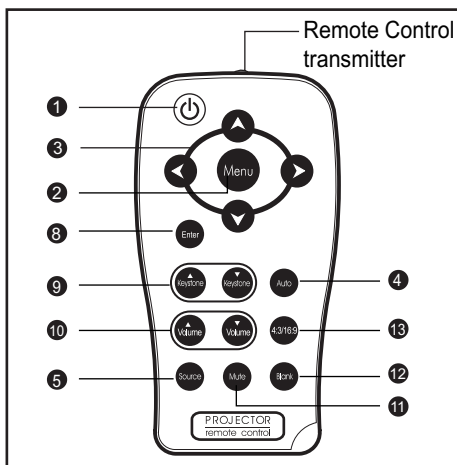
Name	: Function
① Lens	: Projects expanded image.
② Air exhaust	: Expels air that has grown hot inside the projector.
③ Speaker	: Outputs audio sound.
④ Control panel	: Operates the projector. <a href="#">p.16</a>
⑤ Focusing lever	: Adjusts screen focus. <a href="#">p.24</a>
⑥ Zooming lever	: Adjusts screen size. <a href="#">p.24</a>
⑦ Rear panel	: Connects external devices. <a href="#">p.17</a>
⑧ Air intake	: Draws in air from outside the projector.
⑨ Lamp cover	: Remove to replace lamp. <a href="#">p.35</a>
⑩ Tilt adjuster	: Adjusts the projector's horizontal tilt. <a href="#">p.24</a>
⑪ Foot adjuster	: Adjusts the vertical projection angle. <a href="#">p.24</a>
⑫ Foot adjuster release button	: Press to stow the foot adjuster. <a href="#">p.24</a>
⑬ Infrared remote sensor	: Senses commands from the remote control. <a href="#">p.18</a>

# Names of each part on the control panel and remote control

## Control panel



## Remote Control



Name : Main Function

- 1 I/O ON/STANDBY button: Turns the power on/off (standby). [p.21](#)
- 2 MENU/Menu button : Displays menus. [p.27](#)
- 3 Selection button : Menu selections and adjustments,etc. [p.28](#)
- 4 AUTO/Auto button : Automatically adjusts frequency and phase. [p.26](#)
- 5 SOURCE/Source button : Manually selects an input source. [p.25](#)
- 6 LAMP indicator : Displays lamp mode. [p.22](#)
- 7 ON indicator : Lights when internal temperature too high. [p.37](#)
- 8 Enter button : Confirms the selection.
- 9 Keystone / button : Adjusts image distortion caused by tilting the projector. [p.25](#)
- 10 Volume / button : Press the Volume button to increase the volume.  
Press the Volume button to reduce the volume. [p.33](#)
- 11 Mute button : Cuts off the sound temporarily. [p.26](#)
- 12 Blank button : Cuts off the screen temporarily. [p.26](#)
- 13 4:3/16:9 button : Press the 4:3/16:9 button to switch the image aspect ratio from 4:3 to 16:9. [p.26](#)

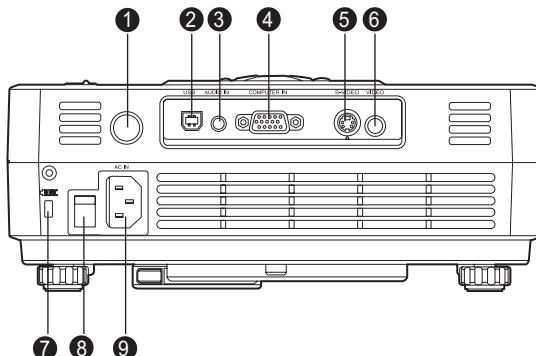
### Note

- For the remainder of this manual, buttons are referred to as follows:

Selection buttons ⇒



# Parts on the rear panel

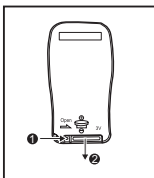


Name	: Main Function
❶ Infrared remote sensor	: Senses commands from the remote control. <a href="#">p.18</a>
❷ USB terminal	: Terminal for service purpose.
❸ AUDIO IN terminal	: Input audio signals from video equipment.
❹ COMPUTER IN terminal	: Input RGB signal from a computer or other source, or a component video signal from video equipment.
❺ S-VIDEO terminal	: Input S-video signals from video equipment.
❻ VIDEO terminal	: Input video signals from video equipment.
❼ Antitheft lock hole	: Attach a safety cable or any other antitheft device.
❽ Main power switch	: AC power line ON (standby)/OFF.
❾ AC IN socket	: Connect the supplied power cord here.

# Preparing and using the remote control

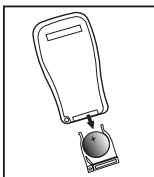
## ■ Loading a Lithium battery into the remote control

- ① Push and slide the battery compartment lid.

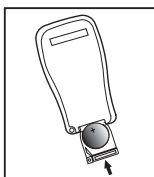


- ② Install a Lithium battery.

Be sure to align the polarity of the battery properly.



- ③ Position the lid over the compartment and snap it back into place.



## ■ Lithium battery

- Before using the battery, be sure to observe the Safety Precautions described in previous pages.
- Remove the battery from remote control when not using for extended periods.

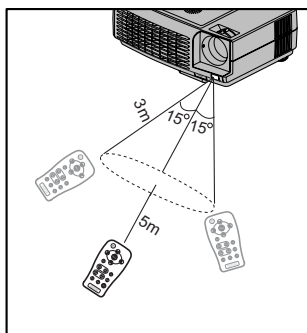
## ■ The remote control

- The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting.
- Do not drop or bang.
- Do not leave in hot or humid locations.
- Do not get wet or place on top of wet objects.
- Do not take apart.
- In rare cases, ambient conditions could impede the operation of the remote control. If this happens, point the remote control at the main unit again, and repeat the operation.

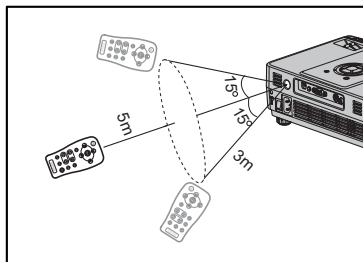
## ■ Operating the remote control

Point the remote control toward the projector's infrared remote sensor, and press a button on the remote control.

- Operating the projector from the front



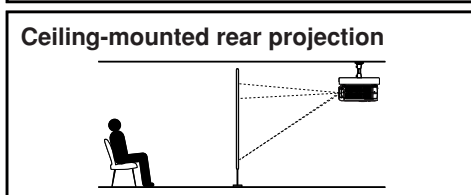
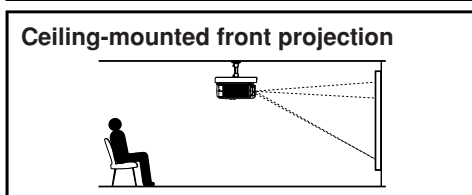
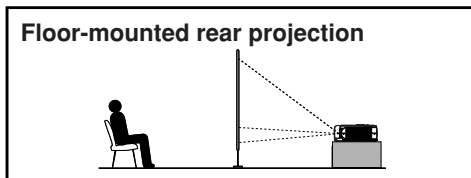
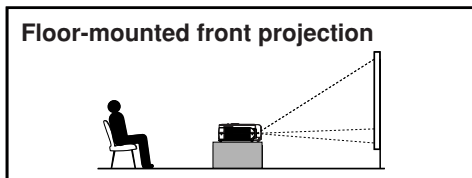
- Operating the projector from the rear



# Placement

## Placement Styles

As shown in the figures below, this device can be placed in 4 different styles. The factory setting is “floor-mounted front projection.” Set the projection type in the **Advanced menu p.32**, in accordance with your needs.

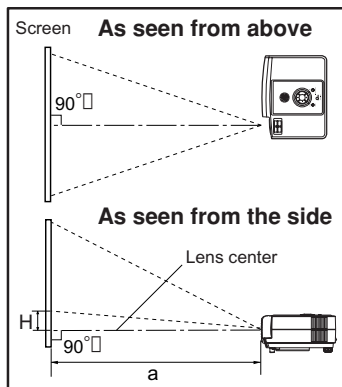


### WARNING

- Always obey the instructions listed in IMPORTANT SAFETY INSTRUCTIONS when placing the unit. Attempting to clean/replace the lamp at a high site by yourself may cause you to drop down, thus resulting in injury.
- If you wish to mount the projector on the ceiling, be sure to ask your dealer to do so. Mounting the projector on a ceiling requires special ceiling brackets (sold separately) and specialized knowledge. Improper mounting could cause the projector to fall, resulting in an accident.
- If the projector is ceiling-mounted, install the breaker for turning off the power in case of anomaly. Let everyone involved with the use of the projector know that fact.

## Projection Distance and Size

Use the figures, tables, and formulas below to determine the projection size and projection distance. (Projection sizes are approximate values for full-size picture with no keystone adjustment.)



$$a \text{ (min length)} = \text{projection size (inches)} \times 0.03636$$

$$a \text{ (max length)} = \text{projection size (inches)} \times 0.04363$$

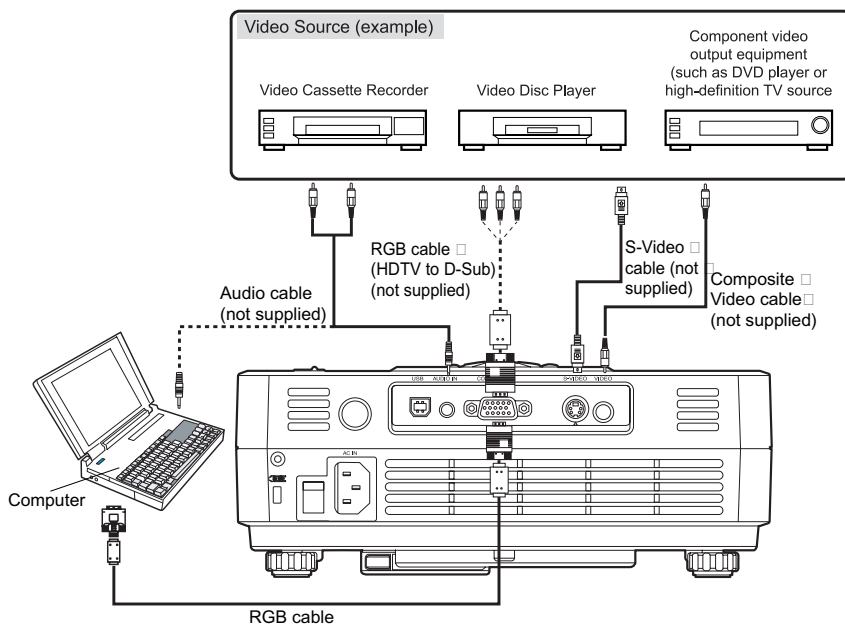
projection size (inches)	projection distance a (m)		height (H) (cm)
	min length (zooming max)	max length (zooming min)	
27.5	-	1.2	5.9
40	1.5	1.7	8.5
50	1.8	2.2	10.7
60	2.2	2.6	12.8
80	2.9	3.5	17.1
100	3.6	4.4	21.3
150	5.5	6.5	32.0
200	7.3	8.7	42.7
229	8.3	10.0	48.9
275	10.0	-	58.7

**a** is the distance (m) between the lens and the screen, and corresponds to a range of 1.20 m to 10.00 m. **H** is the height from the image bottom to the center of the lens.

# Connection

## Before connection

- Read the owner's manual of the device you are connecting to the projector.
- Some types of computer cannot be used or connected to this projector.  
Check for an RGB output terminal, supported signal [p.40](#), etc.
- Turn off the power of both devices before connecting.
- The figure below is a sample connection. This does not mean that all of these devices can or must be connected simultaneously. (Dotted lines mean items can be exchanged.)



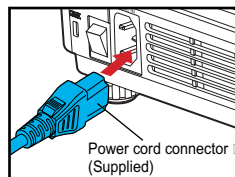
## Note

- Audio always outputs the sound from the connected source.

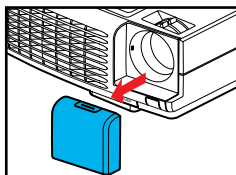
# Turning the power on and off

## ■ Connecting the power cord

- 1 Insert the power cord connector into the AC IN socket of the projector.
- 2 Insert the power cord plug into a wall or other power outlet.



## ■ Removing the lens cover



Be sure to remove the lens cover when the power is turned on. If it is left on, it could become deformed due to heat.

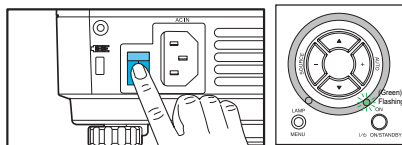
## ■ Turning the power on

- 1 Turn on the main power switch

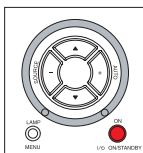
The ON indicator will change to green flashing, indicating standby mode.

- 2 Press the I/O ON/STANDBY button.

The power turns on, and the following 2 green indicators light: ON and LAMP. After a moment, the start-up screen appears.



Control panel



Remote Control



Start-up screen



## CAUTION

- Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyes or sight.
- Do not block the air intake or exhaust. Doing so could cause a fire due to internal overheating.
- Do not place your hands, face, or other objects near the air exhaust. Doing so could cause burns, deform/break the object.

## Note

- The start-up screen will disappear after a moment.

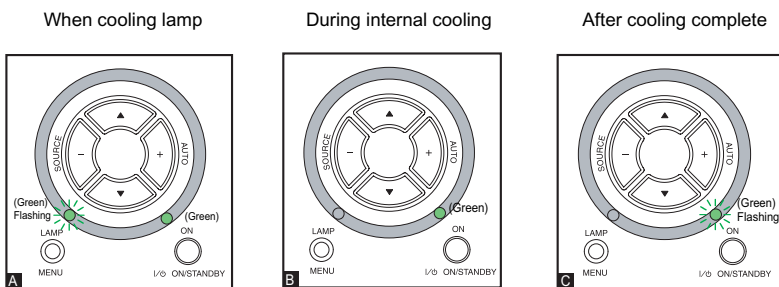
## Turning the power off

### 1 Press the I/⏻ ON/STANDBY button.

A message appears on the screen, confirming that you wish to shut off the power. This message will disappear after a moment. (This operation is no longer valid after the message disappears.)

### 2 Press the I/⏻ ON/STANDBY button again.

The screen turns off, but the internal cooling fan continues to operate for a short while. Then, the projector goes into standby mode.



- A** During cooling, the LAMP indicator flashes. In this state, the power cannot be turned back on.
- B** After the LAMP indicator goes off, the cooling fan continues to operate for a short while, in order to expel excess internal heat. If you are in a hurry, there is no problem with unplugging the power cord or turning off the main power switch in this state.
- C** In standby mode

## Note

- The projector consumes about 6W of power in standby. We recommend that you unplug the power cord or turn off the main power switch if you will not be using the projector for an extended period.

## PRECAUTION

- If the power cord is unplugged before cooling is complete, give the lamp time (about 5 minutes) to cool before plugging it back in. If the lamp overheats, it may fail to light, and its lifetime will be shortened.

# Basic operations

## 1 Turn on the power.

Turn on the power by following the instructions "Turning the power on" [p.21](#)

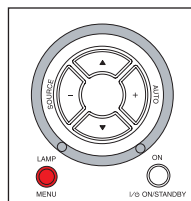
## 2 Select the language.

① Press the control panel's **MENU** button or the remote control's **Menu** button.

② Use the **◀ ▶** buttons to select "Language", and press the **▼** button.

③ Use the **◀ ▶** buttons to select "Language 1" or "Language 2", and press the **▼** button.

Control panel



Remote Control



Language1

English .....	English
Deutsch .....	German
简体中文 .....	Chinese (simplified)
繁體中文 .....	Chinese (traditional)
日本語 .....	Japanese
Français .....	French
Español .....	Spanish
Português .....	Portuguese
Italiano .....	Italian
Русский .....	Russian

Language2

Svenska .....	Swedish
Polski .....	Polish
Türkçe .....	Turkish
한국어 .....	Korean

④ Use the **▲** or **▼** button to select the desired language and press the control panel's **MENU** button or the remote control's **Enter** button.  
Message for setup confirmation is displayed in a selected language.



## 3 Activate the connected device.

Turn on and start the connected device such as a computer.

## 4 Press the control panel's SOURCE button or the remote control's Source button.

An image of the connected equipment is projected.

Each time you press the control panel's SOURCE button or the remote control's Source button, it switches to the input of the connected equipment.

### Note

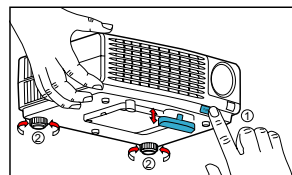
- When [Auto Source Select] is selected in the "Advanced" menu [p.32](#), the image of the equipment which is connected and turned on is projected.

## 5 Projector placement angle adjustments

The placement angle and the height of the projected image can be adjusted by the foot adjuster.

- ① **Lift up the front of the projector to the desired angle, then press the foot adjuster release button.**

The foot adjuster extends. Release the button to lock the position.

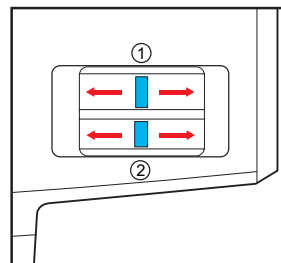


- ② **To adjust the horizontal angle, use the tilt adjuster.**

To stow the foot adjuster, hold up the projector while pressing the foot adjuster release button, then slowly lower the projector.

## 6 Adjusting the screen size and focus

- ① **Use the zooming lever to adjust the screen size.**
- ② **Use the focusing lever to adjust the focus.**



## 7 Adjusting the volume with the remote control's Volume ▲ Volume ▼ buttons

The speaker volume can be adjusted when an audio signal is being input.

### Notes

- Note that a lamp characteristics may rarely cause the brightness to fluctuate slightly.
- A lamp is a consumable item. If used for extended periods, images will appear dark, and the lamp could burn out. This is characteristic of a lamp, and is not malfunction. (The lifetime of the lamp depends on conditions of use.)
- The DMD™ is made using extremely advanced technology, but there may be black spots (pixels that do not light) or bright spots (pixels that are constantly lit) on the panel. Please note that these are not malfunctions.
- Although this projector supports a wide range of RGB signals [p.40](#), any resolutions not supported by this projector (SVGA) will be expanded or shrunk, which will affect image quality slightly. To view high-quality images, it is recommended that the computer's external output should be set to SVGA (800 × 600) resolution.
- With some models of computer having LCD displays or the like, displaying images simultaneously on the projector and the monitor's display may prevent the images from displaying properly. If this happens, turn off the computer's LCD display. For information on how to turn off the LCD display, see the owner's manual of your computer.
- If a signal not supported by the projector is input, the "For best image quality, lower image resolution." or "For best image quality, refresh rate." will appear.
- If no signal is being input from the connected device, the "Searching for source" will appear.

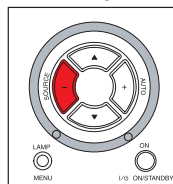


# Using handy features

## Manually selects an input source (Source)

If you are connecting multiple sources to the projector simultaneously, press the control panel's SOURCE button or the remote control's Source button. The projector will detect your source.

Control panel



Remote Control

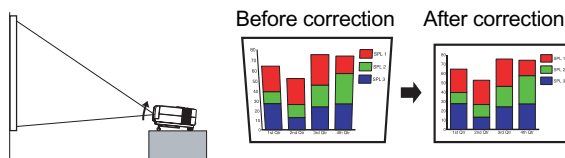


### Note

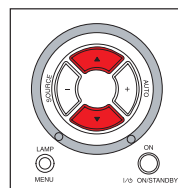
- The image may not be projected or auto adjustment/setting may not be performed correctly for input signals other than those supported by the projector [p.40](#), [p.41](#).

## Correcting the keystone distortion (Keystone)

When the foot adjuster [p.24](#) is used to change the projector placement angle while projecting the image, the picture will undergo keystone (trapezoidal) distortion. This projector is capable of correcting this keystone distortion.



Use the control panel's ▲ ▼ buttons or the remote control's Keystone ▲ Keystone ▼ buttons for keystone adjustment.

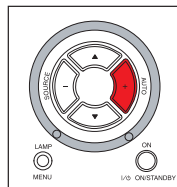


### Notes

- Keystone adjustment is available for the keystone distortion in a slant angle of  $\pm 15$  degrees.
- Keystone adjustment will not change the shape of the menus, the start-up screen, and the background (with no signal input).

## ■ Automatically adjusts frequency and phase (Auto)

If source is a computer, press the control panel's AUTO button or the remote control's Auto button to adjust frequency and phase.



## ■ Switching the image aspect ratio (4:3/16:9)

Toggle the remote control's 4:3/16:9 button to change the aspect ratio.



### ■ Note

- The aspect ratio can also be set via the Image menu [p.28](#).

## ■ Cutting off the sound temporarily (Mute)

### ● Press the remote control's Mute button.

The sound is cut off. (The Mute function is released when pressing the Mute button again.)



### ■ Note

- The mute can also be set via the Audio menu [p.33](#).

## ■ Cutting off the screen temporarily (Blank)

Press the remote control's Blank button to cut off the screen temporarily. Press the Blank button again to reset it.



### ■ Note

- The blank screen color can be set via the Image menu [p.28](#).

# Using the menus

You can call up on-screen menus, and conduct a number of adjustments and settings using the operation buttons [p.16](#) on the control panel (main unit side) and remote control.




## ■ How to use the menus







The menu shown below is for operation instructions purposes and might differ from the actual display.

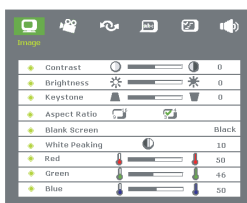
### 1. Press the control panel's MENU button or the remote control's Menu button

Display the main menu

### 2. Select a Category


Select a category by using  , and press . There are following six categories:

-  **Image menu** [p.28](#)
-  **Video menu** [p.29](#)
-  **Display menu** [p.30](#)
-  **Language menu** [p.31](#)
-  **Advanced menu** [p.32](#)
-  **Audio menu** [p.33](#)



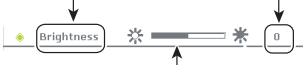
Displays the current adjustments and settings of selected category. Item shown with gray cannot be adjusted with the current input source.



### 3. Adjustments & Settings



Press  to open the menu.

Item


Adjustment/Setting Value






This mark signifies the items can be adjusted/set by using  .

This mark signifies the items can be selected from the list by using  .

After an item is selected, apply it by pressing control panel's MENU or the remote control's Enter.



This mark signifies that there are options. Press   and press  to display a list of options.


The figure shows displays given for operation instructions purposes. As the display may differ depending on the item, use the following pages as a reference.

### 5. End Press the control panel's MENU button or the remote control's Menu button.

The menu disappears.

### 4. Back button

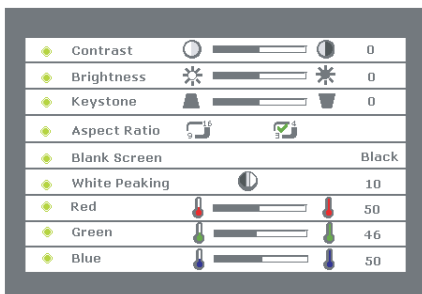
## ■ Note

- Menu adjustments and settings are saved when the power is turned off via the  **ON/STANDBY** button. If the power cable is disconnected before this, or the power goes out, the data will be saved except the lamp hours. The lamp hours will count up from the time when the power is lost.

# Using the menu (Continued)

## ■ Image menu

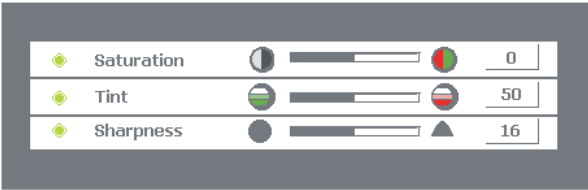
Use this menu to adjust image-related items.



Item ▲ ▼	Description
<b>Contrast</b>	Adjust the image contrast. Lower ◀ ▶ Higher
<b>Brightness</b>	Adjust the brightness of the image. Darker ◀ ▶ Brighter
<b>Keystone</b>	Adjusts image distortion caused by tilting the projector. Reduce the upper width ◀ ▶ Reduce the lower width
<b>Aspect Ratio</b>	Selects this function to fit 16:9, 4:3 aspect ratio. If the input signal is a computer signal greater than SVGA or component 1080i / 720p, 16:9 or 4:3 aspect ratio will be available. 16:9 ◀ ▶ 4:3
<b>Blank Screen</b>	Blanks the screen temporarily, and selects the screen color when Blank Screen is active. Switch with ◀ and ▶. White/Black/Blue/Gray/Red/Green/Yellow/Cyan/Magenta
<b>White Peaking</b>	White peaking can be adjusted between 0 and 10. Switch with ◀ and ▶. Setting 10 will maximize the brightness. Setting 0 will maximize color reproduction quality.
<b>Red</b>	Manually adjusts red. Less red ◀ ▶ More red
<b>Green</b>	Manually adjusts green. Less green ◀ ▶ More green
<b>Blue</b>	Manually adjusts blue. Less blue ◀ ▶ More blue

■ Video menu

Use this menu to adjust video-related items. When using a video source, the on-screen display allows changes to the "Video" menu.



Item ▲ ▼	Description
Saturation	Adjusts a video image from black and white to fully saturated color. Weaker ◀ ▶ Stronger
Tint	Adjust the tint of the image color. Greenish ◀ ▶ Reddish
Sharpness	Adjust the sharpness of the image. Softer ◀ ▶ Sharper

## ■ Display menu

Use this menu to adjust display-related items. When using a computer, the on-screen display allows changes to the "Display" menu.



Item ▲ ▼	Description
<b>Phase</b>	Synchronizes the signal timing of the display with that of the graphic card. If you experience an unstable or flickering image, use the phase function to correct it. Switch with ⏪ and ⏩ to adjust the setting.
<b>Tracking</b>	Changes the display data frequency to match the frequency of your computer graphic card. If you experience a vertical flickering bar, use the tracking function to make an adjustment. Switch with ⏪ and ⏩ to adjust the setting.
<b>H.Position</b>	Adjusts the horizontal position. Left ⏪ ⏩ Right
<b>V.Position</b>	Adjusts the vertical position. Up ⏪ ⏩ Down

## ■ Language menu

Use this menu to select one of the language displaying the menu and messages on the screen.

Language 1	Language 2
● English	○
● Deutsch	○
● 简体中文	○
● 繁體中文	○
● 日本語	○
● Français	○
● Español	○
● Português	○
● Italiano	○
● Русский	○

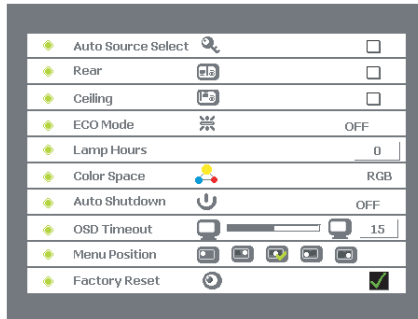
Language 1	Language 2
● Svenska	○
● Polski	○
● Türkçe	○
● 한국어	○

Item ▲ ▼	Description
Language	<p>Selects the language for menu and message displayed.</p> <p>[ ▲ ▼ : Select “Language 1” or “Language 2” ] → [ ▼ : Enter sub-menu ] → [ ▲ ▼ : Select language ] → [ Control panel’s <b>MENU</b>/ Remote control’s <b>Enter</b>: Apply]</p> <p>Language 1: English/Deutsch/简体中文/繁體中文/日本語/Français/Español/Português/Italiano/Русский</p> <p>Language 2: Svenska/Polski/Türkçe/한국어</p>

# Using the menu (Continued)

## ■ Advanced menu

Use this menu to set the related items.



Item ▲ ▼	Description
<b>Auto Source Select</b>	Automatically scans the input source. Use ◀ ▶ to apply.
<b>Rear</b>	The image is reversed horizontally. Use ◀ ▶ to apply.
<b>Ceiling</b>	The image is inverted vertically. Use ◀ ▶ to apply.
<b>ECO Mode</b>	Uses this function to dim the projector lamp light output which will lower power consumption and increase lamp life. ON ◀ ▶ OFF * Pressing ◀ ▶ repeatedly will also change on and off.
<b>Lamp Hours</b>	Displays operating hours since lamp timer reset. Lamp hour counter is displayed in read-only format, and this setting cannot be manually adjusted.
<b>Color Space</b>	Manually selects signal type. It is selectable for RGB input signal only. RGB ◀ ▶ YCbCr ◀ ▶ YPbPr
<b>Auto Shutdown</b>	Uses this function to automatically turn off the lamp if the projector does not detect an input signal for specified time period (30 minutes). ON ◀ ▶ OFF
<b>OSD Timeout</b>	Duration on-screen display menu stays active (at idle state in second). Switch with ◀ and ▶.
<b>Menu Position</b>	Selects the position of on-screen display menu on the screen. Switch with ◀ and ▶.
<b>Factory Reset</b>	Resets the projector to its factory default settings. [Control panel's <b>MENU</b> / remote control's <b>Enter</b> : Enter its sub-menu] → [◀ ▶ : Select setting] → [Control panel's <b>MENU</b> / remote control's <b>Enter</b> : Apply] ✔: Apply. ✖: Chancel.



## ■ Audio menu

Use this menu to set audio-related items.



Item ▲ ▼	Description
<b>Volume</b>	Adjusts the volume. Softer ◀ ▶ Louder
<b>Mute</b>	Cuts off the sound temporarily. ON ◀ ▶ OFF * Pressing ◀ ▶ repeatedly will also change on and off.

# About lamp

The product's light source is a mercury lamp that lights at increased internal pressure. Be sure to fully understand the following characteristics of the lamp and handle it with extreme care.

- The lamp may burst with a loud noise due to impact or deterioration, or fail to light at the expiration of its life.
- How long it takes before the lamp bursts or the life expires may vary greatly by lamp. Some may burst shortly after first use.
- Burst is likely to happen if the lamp is used after the replacement period has elapsed.
- When the lamp bursts, the broken pieces of glass may get inside the product or be released outside from the openings for ventilation.
- When the lamp bursts, a slight amount of mercury gas enclosed in the lamp along with glass dust may be released from the openings for ventilation.

## ■ Immediately replace the lamp when LAMP LED lights amber.

- It is recommended to replace the lamp for approximate 2000 hours after use.
- The risk of burst will increase if the lamp is continuously used without being replaced.
- Frequently check the used hours and prepare spares when the replacement time approaches.  
(Refer to "Status display". [p.37](#))

## ■ When the lamp is broken

- If glass components, including a lamp and a lens, should break, handle the broken pieces with care to avoid injury and contact your dealer for repair service.
- In the event of lamp burst, unplug the product from the wall outlet, leave and completely ventilate the room. Then, thoroughly clean the area around the projector and discard any edible items placed in that area.
- When the lamp bursts, consult a doctor if glass dust or mercury gas gets into your eyes or you breathe it.

# Lamp replacement

A lamp is consumable supplies. If used for extended periods, images will appear dark, and the lamp could burn out. This is characteristic of a lamp, and is not malfunction. (The lifetime of the lamp depends on condition of use.) If this happens, replace it with a new one.

### WARNING

- If the projector is mounted on the ceiling, it is recommended to use your Toshiba dealership when the lamp has to be exchanged.
- When replacing, always use lamp "TLPLS9" (sold separately).

### CAUTION

- If you have been using the projector, the lamp will be very hot, and may cause burn injuries. Wait for the lamp to cool (for longer than 1 hour) before replacing it.
- If the lamp should break, please handle with care to avoid injury due to broken pieces and contact your dealer for repair service.

## 1 Unplug power cord.

## 2 Wait until lamp is sufficiently cooled.

Wait for at least 1 hour.

## 3 Remove the lamp cover.

Loosen the screws on the lamp cover and remove the lamp cover.

## 4 Pull out the lamp.

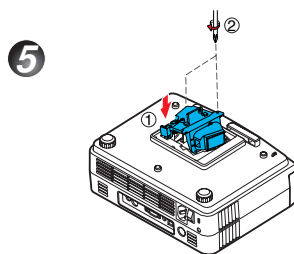
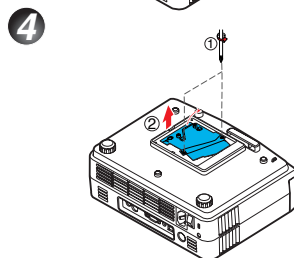
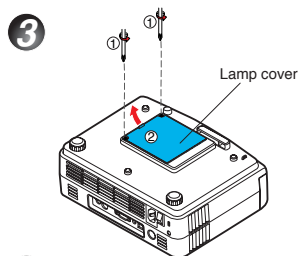
Loosen the screws on the bottom of the lamp assembly. Grasp the lamp handle and pull the lamp assembly directly out of the projector.

## 5 Mount the new lamp.

Align the orientation, press down until the bottom is reached, and lock in place using the lamp locking screws.

## 6 Replace the lamp cover.

Align the cover, and press it in, then tighten the screws loosened in step 3 until the lamp cover is no longer loose.

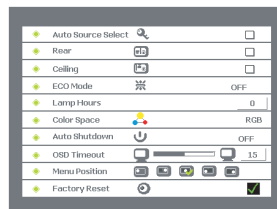


## Notes and Precautions

- Attach the lamp cover correctly so that it is not loose. If it is not attached correctly, the lamp may fail to come on [p.37](#), and the lamp's lifetime may be shortened.
- Always replace the lamp with a new one.
- The lamp is made out of glass. Do not touch the glass surface with your bare hands, bang it, or scratch it. (Dirt, jolts, scratches and the like could break the lamp.)

## Lamp Hours Reset

- ① Select "Factory Reset" option in the Advanced menu.
- ② Press control panel's "+" Button 3 times and "-" button 3 times.
- ③ Lamp Hours will be automatically reset.



## Lamp replacement (Continued)

### ■ Used Lamps

This projector's lamps contain trace amounts of environmentally harmful inorganic mercury. Be careful not to break used lamps, and dispose of them in accordance with local regulations.

## Lens and main unit cleaning

### ⚠ WARNING

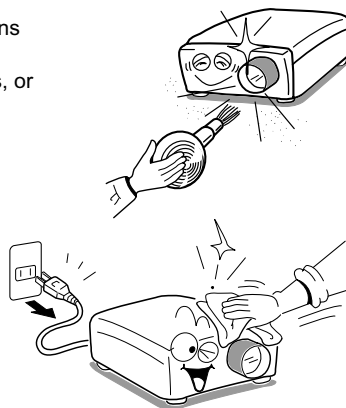
- Request cleaning and maintenance of a ceiling-mounted unit from your projector dealership. Attempting to clean/replace the lamp at a high site by yourself may cause you to drop down, thus resulting in injury.

### ■ Lens cleaning

- Clean the lens with a commercially available blower and/or lens cleaner.
- The lens is easily scratched, so do not rub it with hard objects, or strike it.

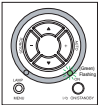
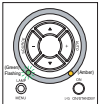
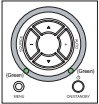
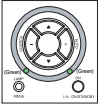
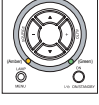
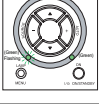

### ■ Main unit cleaning

- Clean the main unit after unplugging the power cord.
- Wipe dirt off the main unit gently with a soft cloth.
- If the soiling is severe, dip the cloth in a neutral detergent diluted in water, wring well, and gently wipe off the dirt, then finish up by wiping with a dry cloth.



# Status display

The indicator informs you of projector state.

	The projector is powered and ready.
	The projector system has some problems with its fan, so the projector cannot start up.
	The projector is in good condition on working.
	The lamp is in good condition and is projecting at maximum brightness.
	The lamp has reached its end of life and must be changed soon. The lamp will continue to operate until it fails. Change the lamp. If the lamp is off, then the ballast will become malfunction.
	The projector is shutting down. The fan motor is cooling the lamp for shutdown. Do not unplug the power cable or turn the power switch off before the lamp LED turns off. The fan motor
	Temperature is too high. The lamp will turn off.

## PRECAUTION

- Make sure to unplug the power cord if something goes wrong.

# Before calling service personnel

If you think something is wrong, check the followings before contacting customer service.  
Please see “**Status display**” [p.37](#) as well.

If This Happens	Check
<b>No power</b>	<ul style="list-style-type: none"> <li>Is the power cord plugged in? Is it connected to the projector?</li> <li>Is the lamp cover loose? <a href="#">p.35</a></li> </ul>
<b>Power goes out during use</b>	<ul style="list-style-type: none"> <li>Is the ambient temperature high? <a href="#">p.37</a></li> <li>Is the air intake or air exhaust blocked?</li> </ul>
<b>No picture</b>	<ul style="list-style-type: none"> <li>Is the projector turned on? <a href="#">p.21</a></li> <li>Is the brightness setting minimized? <a href="#">p.28</a></li> <li>Are the connections set up correctly? <a href="#">p.20</a></li> <li>Are all the connected devices functioning properly?</li> </ul>
<b>No audio</b>	<ul style="list-style-type: none"> <li>Is the projector turned on? <a href="#">p.21</a></li> <li>Is the mute function on? <a href="#">p.33</a></li> <li>Is the volume setting minimized? <a href="#">p.33</a></li> <li>Are the connections set up correctly? <a href="#">p.20</a></li> <li>Are all the connected devices functioning properly?</li> </ul>
<b>Picture not displayed correctly</b>	<ul style="list-style-type: none"> <li>Is the input signal supported by the projector? <a href="#">p.40</a> , <a href="#">p.41</a></li> <li>Is there something generating an abnormal video signal, for instance the video tape?</li> </ul>
<b>Picture blurred Part of picture out of focus</b>	<ul style="list-style-type: none"> <li>Is the lens dirty? <a href="#">p.36</a></li> <li>Is the lens focus adjusted optimally? <a href="#">p.24</a></li> <li>Is the projection distance within the projector's supported range? <a href="#">p.19</a></li> <li>Is the projector's screen placement angle tilted too far? <a href="#">p.19</a></li> <li>Are the sharpness or sampling phase adjustments off? <a href="#">p.29</a> , <a href="#">p.30</a></li> </ul>
<b>Image is dark</b>	<ul style="list-style-type: none"> <li>Are the brightness or contrast adjustments off? <a href="#">p.28</a></li> <li>Is the lamp nearing the end of its service life? <a href="#">p.32</a> , <a href="#">p.37</a></li> </ul>
<b>Colors too light Bad shading</b>	<ul style="list-style-type: none"> <li>Are the tint, Red, Green or Blue adjustments off? <a href="#">p.28</a> , <a href="#">p.29</a></li> <li>Is the screen dirty?</li> <li>Is the lamp nearing the end of its service life? <a href="#">p.32</a> , <a href="#">p.37</a></li> </ul>
<b>Remote control doesn't work</b>	<ul style="list-style-type: none"> <li>Is the remote control's battery drained?</li> <li>Is the battery inserted into the remote control correctly? <a href="#">p.18</a></li> <li>Is the remote control being used within the effective range? <a href="#">p.18</a></li> <li>Are there any obstructions between the remote control and projector?</li> <li>Are there any fluorescent or other bright lights shining at the projector's infrared remote sensor?</li> </ul>

# Specifications

## ■ List of general specifications

Item	Specification
Consumption Power	250 W
Weight	2.4 kg
External Dimensions (including protruding parts)	256 x 102 x 200 mm (W x H x D)
Cabinet material*	PC+ABS resin and ABS resin
Conditions for usage environment	Temp: 5°C to 35°C; relative humidity: 35% to 85%
Display pixels	1 chip DMD™
Picture elements	480, 000 pixels (800 x 600)
Lens	Zoom lens F=2.5 f=20.2-24.2 mm
Lamp	High-pressure mercury lamp
Projection screen size	27.5-275 inches
Projection distance	1.2-10.00m
Speaker	2W x 1
Connection terminal	COMPUTER IN terminal
	Mini D sub 15 pin RGB / Y/P <sub>B</sub> /P <sub>R</sub> (dual use)
	S-VIDEO terminal
	Mini DIN 4 pin
	VIDEO terminal
	RCA Pin Jack, 1 V (p-p), 75 Ω
	AUDIO terminal
	ø3.5mm dia. stereo mini-jack, 1.5V (rms); 22 kΩ or more

\* Each plastic part displays the materials it is made from, in order to facilitate recycling after this product becomes no longer usable.

## ■ Note

- Design, specifications, etc. subject to change without notice for improvements, etc.

## ■ List of supported signals (RGB signals)

This projector supports the following RGB signals. Note, however, that depending on the computer model, the screen may show flicker or streaking. Please adjust the projector if this happens.

Preset signal		fH (kHz)	fV (Hz)	Sync	Size
640 x 480	VGA mode 3	31.469	59.940	H(-), V(-)	800
	VGA VESA 72 Hz	37.861	72.809	H(-), V(-)	832
	VGA VESA 75 Hz	37.500	75.000	H(-), V(-)	840
	VGA VESA 85 Hz	43.269	85.008	H(-), V(-)	832
800 x 600	SVGA VESA 56 Hz	35.156	56.250	H(+), V(+)	1024
	SVGA VESA 60 Hz	37.879	60.317	H(+), V(+)	1056
	SVGA VESA 72 Hz	48.077	72.188	H(+), V(+)	1040
	SVGA VESA 75 Hz	46.875	75.000	H(+), V(+)	1056
	SVGA VESA 85 Hz	53.674	85.061	H(+), V(+)	1048
1024 x 768	XGA VESA 60 Hz	48.363	60.004	H(-), V(-)	1344
	XGA VESA 70 Hz	56.476	70.069	H(-), V(-)	1328
	XGA VESA 75 Hz	60.023	75.029	H(+), V(+)	1312
	XGA VESA 85 Hz	68.677	84.997	H(+), V(+)	1376
1152 x 864	SXGA VESA 70 Hz	63.995	70.016	H(+), V(+)	1472
	SXGA VESA 75 Hz	67.500	75.000	H(+), V(+)	1600
	SXGA VESA 85 Hz	77.487	85.057	H(+), V(+)	1568
1280 x 960	SXGA VESA 60 Hz	60.000	60.000	H(+), V(+)	1800
	SXGA VESA 75 Hz	75.000	75.000	H(+), V(+)	1680
1280 x 1024	SXGA VESA 60 Hz	63.981	60.020	H(+), V(+)	1688

## ■ Note

- Signals which resolution exceeds the native resolution (800 x 600 pixels) will be compressed. For this reason, some information may be lost, or image quality may be affected.



## Specifications (Continued)

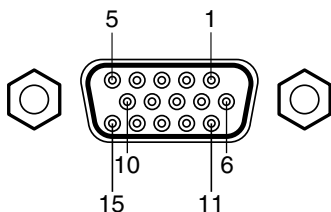
### ■ List of supported signals (HDTV signals)

Signal format	fh(kHz)	fv(kHz)
480i	15.8 kHz	60 Hz
480p	31.5 kHz	60 Hz
576i	15.6 kHz	50 Hz
576p	31.3 kHz	50 Hz
720p	45.0 kHz	60 Hz
720p	37.5 kHz	50 Hz
1080i	33.8 kHz	60 Hz
1080i	28.1 kHz	50 Hz

### ■ List of supported signals (Video, S-Video signals)

Video mode	fh(kHz)	fv(Hz)	fsc(MHz)
NTSC	15.73	60	3.58
PAL	15.63	50	4.43
SECAM	15.63	50	4.286
PAL-M	15.73	60	3.58
PAL-N	15.63	50	3.58
PAL-60	15.73	60	4.43
NTSC4.43	15.73	60	4.43

### ■ Pin assignment of COMPUTER IN terminals



Mini D sub 15 Pin connector

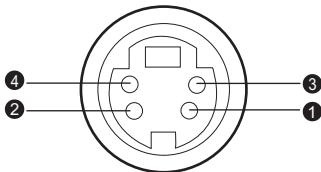
#### Input Signal

- RGB input  
RGB signals: 0.7V (p-p) 75  $\Omega$   
Horizontal sync signal: TTL level (Pos/neg polarity)  
Vertical sync signal: TTL level (Pos/neg polarity)
- Y/PB/PR input  
Y signal: 1.0V (p-p) 75  $\Omega$   
PB/PR signals: 0.7V (p-p) 75  $\Omega$

Pin No.	Pin description	
	During RGB input	During Y/PB/PR input
1	Video signal (R)	Color difference signal (PR)
2	Video signal (G)	Luminance signal (Y)
3	Video signal (B)	Color difference signal (PB)
4	N.C	*
5	GND	*
6	GND (R)	GND (PR)
7	GND (G)	GND (Y)
8	GND (B)	GND (PB)
9	+5V	*
10	GND	*
11	GND	*
12	SDA	DDC data serial signal
13	Horizontal sync signal	*
14	Vertical sync signal	*
15	SCL	DDC data clock signal

\* Do not connect anything.

## ■ Pin assignment of S-Video terminal



Mini DIN 4 connector

Pin No.	Signal Name	Description
1	GND (Y)	GND (Y)
2	GND (C)	GND (C)
3	Y	Luminance and sync signal
4	C	Crominance signal

Luminance 0.714V (p-p) 75  $\Omega$

Crominance 0.286V (p-p) 75  $\Omega$

## ■ Separately Sold Product

Replacement Lamp      Model TLPLS9

**TOSHIBA CORPORATION**